

Name: _____

pa1106: Factoring with box when $a = \text{prime}$ (v12)

Example

Use the box to factor $2x^2 - 9x - 18$.

Guess and check, based on factor pairs of -18 , until you find the pair that results in a linear coefficient of -9 after combining like terms.

| | | |
|----|--------|--------|
| * | x | -6 |
| 2x | $2x^2$ | $-12x$ |
| 3 | $3x$ | -18 |

$2x^2 - 12x + 3x - 18$

Combine like terms.

$2x^2 - 9x - 18$

ANSWER: $(2x + 3)(x - 6)$

Question 1

Use the box to factor $5x^2 + 34x + 24$.

| | | |
|----|--------|----|
| * | x | |
| 5x | $5x^2$ | |
| | | 24 |

ANSWER:

Question 2Use the box to factor $7x^2 + 60x - 27$.

| | | |
|----|--------|-----|
| * | x | |
| 7x | $7x^2$ | |
| | | -27 |

ANSWER:

Question 3Use the box to factor $3x^2 - 13x + 12$.

| | | |
|---|--|--|
| * | | |
| | | |
| | | |

ANSWER: